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Cotton Fiber and Processing Test Results



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Agricultural Marketing Service
U.S. DEPARTMENT OF AGRICULTURE
Memphis, Tenn. 38122 January 28, 1977

This is the last report for the 1976 crop. These reports were published bi-weekly during the harvesting season and will be summarized in a comprehensive report at the end of the crop year. A detailed description of the tests shown in this report may be found in the summary report for the previous season. 1 These reports are available on request from the Standardization Section, Cotton Division, Agricultural Marketing Service, U. S. Department of Agriculture, 4841 Summer Avenue, Memphis, TN 38122.

^{1/} Summary of Cotton Fiber and Processing Test Results, Crop of 1975, USDA, AMS, Cotton Division, May 1976.

COTTON FIBER AND PROCESSING TEST RESULTS, CROP OF 1976

Discussion of Test Results

Short staple cottons tested from the Southwestern Area through January 21 show fibers to be coarser and slightly weaker than last season, according to the Cotton Division, Agricultural Marketing Service, USDA. Shirley Analyzer nonlint content is lower, but picker and card waste is higher. Yarns spun from these samples are weaker, but show fewer imperfections than last season. Spinning potential yarn number is lower.

Average test results for all medium staple samples tested to date show slightly shorter and stronger fibers than a year ago. Shirley Analyzer nonlint content is lower, but picker and card waste is higher. Yarns spun from these samples show about the same quality characteristics as a year earlier.

Southeastern Area medium staple samples are slightly longer and more uniform than a year ago. Fibers are coarser and stronger. Shirley Analyzer nonlint content is lower. Yarn skein strength is higher. Yarn imperfections are fewer and the spinning potential yarn number is higher.

South Central medium staple samples are shorter, less uniform and stronger at zero gage fiber tests than a year ago. Shirley Analyzer nonlint content is lower, but picker and card waste is higher. Yarn strength and appearance grades are about the same as a year ago. Yarn imperfections are fewer. Spinning potential yarn number is lower.

Southwestern medium staple samples tested are slightly longer, more uniform, coarser and weaker at zero gage strength tests. Picker and card waste is higher. Yarns spun from these samples have higher appearance grades and show fewer imperfections than a year ago.

Medium staple samples from the West are slightly shorter and weaker than a year ago. Picker and card waste is higher. Yarns spun from these samples are weaker and show lower appearance grades than last season. Yarn imperfections are fewer. Spinning potential yarn number is lower.

Long staple samples tested through January 21 this season are longer, more uniform, and coarser than a year ago. Shirley Analyzer nonlint content and manufacturing waste are lower this season. Yarns spun from these samples are stronger and have fewer imperfections. The spinning potential yarn number is higher than a year ago.

No additional long staple samples were received during this test period.

American Pima extra long staple samples tested to date are longer and have about the same strength and mike properties as a year earlier. Both picker and card waste and comber waste are lower than a year ago. Yarns spun from these samples have about the same quality characteristics as a year earlier.

Averages of fiber and processing tests from selected gin points in the United States through January 21, 1977 1/

Table 1.--Cotton:

	Staple group Area, and Crop year		Short Stable:	Southwest 1975 1976	Medium Staple: Southeast 1975 1976	South Central 1975 1976	Southwest 1975 1976	West 1975 1976	U.S. Average 1975 1976	Significant dif- ference 2/	1/ Based on 2/ Minimum c
	Lots	tested	No.	960	44 50	114	386	69	263		a limit
	Fibro	2.5% span	Inches	.95	1.07	1.10	1.05	1.12	1.09	0.02	Based on a limited number of samples Minimum differences considered to be
Fiber	raph	2.5% 50/2.5 span unif.	Ret:	45 45	5t1 7t1	†††	43	45 45	45 74 75	a	of samples lered to be
test	Mike	ness	Rdg.	4.3	4.5	44 60	3.7	t. 4.	44	0.8	
results	Fiber	Zero	Mpsi	85 84	83	88	83 82	98	86 87	a	of modal quality significant for
	strength	1/8" gag e	G/tex	22	53	53	22	26	83 42	ч	of modal quality significant for comparisons in this table.
		S A nonlint	Ret.	7.0	w w o w	3.1	3.7	. a . a	₩ W H &	0.5	isons ir
		P&C waste	Ret.	6.7	6.9	5.7	9.9	ν.ν. ν.ω.	17.00 8.01	0.5	this t
Processi	Yaz	Skein str.	Lbs. 22s	88 88	97	105	103	123 118	108	4 (22s)	able.
Processing test results	Yarn quality	ppear- ance	Index	109	96.	101 .	. 88	89	2%	5	
results		Imperf- actions	No. Yarn	23	98	21 17	32 25	23	23	α	
	2000	Potent.	Yarn No.	743 740	53	26	55	69	60 58	n	

Based on a limited number of samples of modal quality . Minimum differences considered to be significant for comparisons in this table.

Averages of fiber and processing tests from selected gin points in the United States through January 21, 1977 1/ (Continued)

Table 1.--Cotton:

	SPY	No.	5 ⁴ 7	62 57	89	th2				m
	ctns	No.	10	9	22 16	15		01 CV		a
	card	No.	19	19	35.	23 88	티			Q
lity	rance	Indx abed Ya	911	120 103	たみ	109	oed Yar	108		5
	Appea	Indx	110	110	82 84	8,88	s Com			5
Ya	ped	Lbs.	115	125	158	135	25	67		4(22s) 2(50s)
	stren carded	179	91	104	138	113	18 18			4(22s)
Comber	Waste	Pet.	18.8	18.1	16.1	17.6	ican Pin	18.4		0.5
P&C Waste		Ret.	9.6	9.0	8.7	9.1	Amer	4.7		0.5
ath 1/8"	Non- lint	Rt.	3.1	3.8	3.1	0 0 0 0		3.2		0.5
	1/0 Rage	G/tx	22	23	26	77. 75.		33		. 4
			85	88 4	93	89	7	104		a
	MIKE	र्द्ध	7.7	4.0	8 8 8 4.	3.8	Arra	3.6		0.2
th	Unif	Pet.	43 45	43 42	45	45		31		N
Ler	Spen	Į.	1.09	1.11	1.16	1.12		1.47		0.02
Lots		No.	18	9 %	17	41 20		13		
Area, and	Crop year	Long Staple:	Southeast 1975 1976	South Central 1975 1976	West 1975 1976	U.S. Average 1975 1976	xtra Iong Staple:	West 1975 1976		Significant Difference 2/
	Lots Length SA P&C Comber Yarn Quality	LotsSpanUnifMikeZero 1/8"Non-WasteWasteStrengthAppearanceImpriSpanUnifMikeZero 1/8"Non-WasteStrengthAppearanceImpri	Lots Span Unif Mike Zero 1/8" Non- Waste Waste Strength Appearance Imprectus No. In. Pet. Rdg. Mpsi G/tx Pet. Pet. Pet. Lbs. Lbs. Lbs. Indx Indx No. No. 22s Carded & Combed Yarn Span Lots Span Unif Mike Zero 1/8" Non- Waste Waste Combed carded combed combed combed sard combed in No. No. No. 22s Carded & Combed Yarn	Lots Lots Lots Mike Zero 1/8" Non- Waste Strength Appearance Imprectns Rage Rage Rage Lint Rage Rage	Lots Span Unif Mike Zero 1/8" Non- Waste Strength Strength Appearance Imprecting Im	Lots Lots	Mo. Lot Lot	Lots Span Mike Strength Strength Strength Mike Raste Raste Strength Combed Carded Combed Carded Combed Carded Combed Carded Carded Combed Carded Combed Carded Car	Mo. Lot Span Unit Mile Strength Strength	No. Link High Strength Impresented Impresente

Based on a limited number of samples of modal quality Minimum differences considered to be significant for comparisons in this table.

Table 2 --Cotton, American upland short staple: Quality characteristics by production areas, crop of 1976

									- 0 -
	Spin. Poten-	tial	외		4.1	44	30	*	38
t	ct'ns	22sor 27 tx	<u></u> 일		11	38	13	01	22
rns	Imprfect'ns	8s or 22sor 74 tx 27 tx	외		72	59	56	1	37
ded Ya		2sor 7 tx	외		100	100	110	120	011
ts - Car	Appearance Index	8s or 22sor 8s or 22sor 74 tx 27 tx	No.		120	011	120	130	120
Processing Test Results - Carded Yarns		22s or	Pet		6.9	6.2	5.0	0.9	6.2
sing Te	Elongation	8s or 22s or 8s or 22s or 7h +x 27 +x 7h +x 27 +x	Pct		ENT 8.1	PERCENT 87 7.5	.ENT 6.7	PERCENT 91 7.2	7.3
Proces	цэ	22s or	rps		70 PERC ENT		90 PERCENT	_	95 PERCENT 6 88 7.
	Strength	8s or	Tops		70 PERCI 284 92	275	90	282	276
	Color Raw Stock P & C		Pet		7.1	7.4	7.1	6.1	5.1
	lor Stock	Yel	일		*	9	m	æ	'n
	Color Raw Sto	Gra	왕		7	*	7	~	m
	Elon- S.A. gat'n Non- 1/8" lint		Pet		3.9	3.9	2.7	2.6	2.7
t s			Pet		ASTER 8.2	ER 18 7.1	ER 18 6.8	57	ER 18
Fiber Test Results	er oth	1/8"	Gage G/tex		BLIGHTMASTER 20 8.2	PAYMASTER 18	PAYMASTER 18 19 6.8	LANKART 57	PAYMASTER 18 20 7.5
iber T	Fiber	Zero	Gage		80 4*	76	87	86	88
		Mike	Rdg		3.4	3.1	8 • 4	5.4	0.4
	call can	Unif	Pet		4	‡	24	8	45
	Digital	2.5% Uni	span		16.0	0.97	88	16.0	0.91
	1		328	AREA	/ 31	432/29	1/30	32 31	42½/ 30 0.91
Area,	tion				XAS 421	43,	45	32	
ion	fica	Grade	ى ئ		T TE	> 0	T SP	T SP	TON
Production Area,	Classification &	Samp	No Name & Code	SOUTHAEST	NORTHWEST TEXAS LAMES A 3 SLM LT SP 421/31 0.97	LOCKNEY 3 SLM SP	16∪P 3 SLM LT SP 42½/30 0.88	OLNEY 2 MID LT SP	SILVERTON 3 SLM LT SP

 $\frac{1}{2}$ Reduced from 32 because of bark $\frac{2}{2}$ Reduced from 33 because of bark

Table 3 --Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1976

	e e	<u>.</u> .													
		tial	임		09	52		54	62		55		50	50	53
	ect'ns	s or 50s or tx 12 tx	임		18	10		0.1	18		31		15	19	=
rns	Imprfect'ns	22s or 27 tx	SI.		27	12		11	24		43		16	25	14
- Carded Yarns	eo.	50s or 12 tx	8]		80	06		80	70		09		09	09	80
- Car	Appearance Index	22s or 50 27 tx 118			100	110		001	06		70		80	80	06
Processing Test Results			21						4		ıζ		7		6
Test R	Elongation	r 50s or 12 tx	Pet		4.5	3.9		3.6	4.4		4.5		3.7	4.1	3.9
ssing	Elon	22s or 27 tx	Pet		PERCENT 34 6.J	PERCENT 30 5.5		PERCENT 31 5.J	PERCENT 35 6.2		PERCENT 35 6.J		PERCENT 29 5.2	PERCENT 30 6.0	PERCENT 31 5.5
Proce	ugth	50s or 12 tx	Lbs		98 PER 34	O PER			80 PER		0 PER 35				D PER 31
	Strength	22s or 50s or 27 tx 12 tx	I.bs		107	100		100	104		100		100	95	100
	P & C	Waste	Pet		7.9	1.9		6.1	5.2		8 • 9		4.2	6.3	6.5
		Yel	욁		m	4		2	m		٠		2	2	2
	Color Raw Stock	Gra	<u></u> 일		2	m		2	7		4		0	0	0
	S.A.	Non- Lint	Pet		5.1	3.4		6 2.8	3 2.9		5.3		6 2-1	2.4	1.9
	Elon-	gat'n 1/8"	Pet		612	6.9		STCNEVILLE 256 22 5.3	STONEVILLE 213 22 7.6		312 * 6.9		STONEVILLE 256 21 5.9	E 61 7.6	IE 61 7.1
Results			 		MCNAIR 6	CCKER 201 22 6.		NEVI L	NE V I L				NE VI L	DELTAPINE 61 23 7.6	TAPIN
Pest R	3 H	1/8" Gage	G/tex		MCN 22	CCK 22		STC.	STOI 22		COKER 23		210	DEL 23	0EL 24
Fiber Test	Fil Stre	Zero	Mpsi		8 5	87		91	86		65		83	85	83
		Mike	Mar		4.5	4.7		4.7	4-0		3.3		3.9	4.5	9-4
	.l aph	Unif.	Pet		45	46		43	4		0,4		45	4	4 4
	Digital Fibrograph	2.5% span	티		1.11	1.03		1.09	1.05		1.16		1.10	11.11	1.10
		Stple	32s	AREA '		34	AREA	34	34	AREA	s 53 2/35	AREA	34	35	34
Area,	ber			₹	CIRCLE 511/35	4A 42		41	45	<	TEXAS 53 É	¥	.ΕΥ 31	31	31
Production Area, Classification	& Sample Number	Grade Name & Code		-	CIRC	ROLIN T SP	NTRA	11	E SURG T SP	<u> </u>			V ALI		II A IKLAN
Produc Class	Samp	Name		SOLTHEAST	CEORGIA SCCIAL 3 LM	NORTH CAROLINA SHELBY 3 SLM LT SP	SOUTH CENTRAL	MISSISSIPPI TRIBBETT 3 SLM	TENNESSEE CYEKS BURG 3 SLM LT SI	SJUTHWEST	LUBGOCK 3 LM SP	!	ARIZCNA MOHAVE VALLEY 3 MIJ	RCLL 4 MIU	CALIFURNIA MESTMORLAND 3 MID
		2	1	331	CEO	AUR.	SOU	WIS	TEN 3	SJU	N3R L	MEST	AA I	A 4	CAL

1/ Reduced from 41 because of bark 2/ Reduced from 43 because of bark

				Towns	su. parador l	50s or 80s or	12 tx 7 tx		No		
		nbed Yarns	bed Yarns		Index	Waste Waste 50s or 80s or 50s or 80s or 50s or 80s or 50s or 80s or	12 tx 7 tx		양		
		Processing Test Results - Combed Yarns		st Results - O		Strength Elongation Appearance		50s or 80s or	12 tx / tx		let let
		Processing Tes	rocessing Tes			50s or 80s or	75 LX / TX	The	SOT		
					naw Stock P & C Comber	Waste		D2+			
				,	ಶ ಆ	Waste		440			
				Color	A COCK	Gra Yel	a Yel		있 임		
			-	A. b.	티	nt Gr	7	Pct			
			-	on- S.	'n No	gat'n Non- 1/8" Lint					
		ults		Elc	gar	1	J	Pct			
		st Res		er eth	Zero 1/8"		Gage C/+cs				
		Fiber Test Results	1,50	Strengt	Zero Gage		147	Mpsi			
		Eq.			Mike						
			Ve	25	į	3	4				
Ī			Arr	Length		7	Į,	ij			
		-		~	_	ardic	32s				
	Production Area,	Classification	শ্ব	Sample Number	No Grade	Name & Code					

Table h --Cotton, American Pima extra long staple: Quality characteristics by production areas, crop of 1976

30s or	7 + 2	2 2		~	
Os or	×+ 0	No No		-	
Gage 1/0 Little Gra red 10 to	7 tx l	외		001	9
os or	le tx	윘		110	
30 . 2	tx -	체		1.4	4
10 200	TS CX	Pet Libs Libs Pet Pet No No		5.3	ic c
	×2 -	킯		1 35	± 2,5
10 + 04	T-C 0.7	Lbs		PERCEN 66	PERCEN
		Pet		1000	17.2
		Pet		7.5	7.2
l xeT		읽		v	S
era Crea		위		4	4
71170		Pet		3.5	3.8
0/7		Pet		7.4	7.9
Gage		G/tex Pct Pct No No Pct		PIMA S-5 37 7.4 3.5 4 5 7.5 17.1 66 35 5.3 4.7 110 100	34 7-9 3-8 4 5 7-2 17-2 65 34 5 5 100 100 PERCENT
- gage		Ten is		_	
	1			1.52 30 4.1 108	1.48 33 3.3 104
	1			30	33
	T	1		.52	4.8
	30°	1	EA		4
١			AREA	94	44
TOTAL DE COME				NOE 4	4
			WEST	ARIZONA CASA GRANDE 3	MENDEN 3
			*	4	